

## ROSS ENVIRONMENTAL ASSOCIATES, INC.

Hydrogeology, Water Quality, GIS Planning, Remediation,  
Regulatory Compliance & Permitting, Environmental Site  
Assessments, and Radon Mitigation



31 August 2012

Michael & Susan Judd  
5141 Nelson Hill Road  
Derby, VT 05829

RE: *Supply Well Inspection/Sensitive Receptor Survey - Judd Residence*  
*5141 Nelson Hill Road, Derby, Vermont (SMS# 2012-4280)*

Dear Mr. & Mrs. Judd,

Ross Environmental Associates, Inc. (**R.E.A.**) has completed additional work on your property located at 5141 Nelson Hill Road in Derby, Vermont (**Figures 1 & 2, Attachment A**). The additional work included the video inspection of the on-site supply well, collection of water samples from the point-of-entry (POE) treatment system for laboratory analysis, and a receptor survey including the collection of water samples from bedrock supply wells serving nearby properties. One of the primary objectives of the investigation was to provide sufficient data to select a location for an alternate drinking water supply well for the Judd residence. All work was completed as outlined in the work plan/cost estimate dated 31 July 2012, that was approved in the letter from Ms. Linda Elliot of the Vermont Department of Environmental Conservation (VT DEC) dated 2 August 2012. Photographs obtained during the site investigation are included in **Attachment B**.

The Judd Residence is currently listed as a High Priority petroleum release site by the VT DEC (SMS# 2012-4280) related to the gasoline release from the former AST system, which occurred in the late-Summer/early-Fall of 2011.

### CONCLUSIONS AND RECOMMENDATIONS

Based on review of the information collected to date, the likely source of petroleum contamination impacting the Judd's on-site supply well is the gasoline spill associated with the former AST system. Residual contamination from the area of the surface spill appears to have migrated within the upper bedrock formation, either along the bedrock surface or within the upper zone of highly weathered bedrock, and entered the on-site well along the drive shoe at the bottom of the casing. Deeper fractures were noted during video inspection of the supply well; however, no obvious signs of contaminant entry were noted at the deeper fractures. In addition, no petroleum contamination was indentified in any of the off-site supply wells sampled as part of this investigation, which suggests that contamination is likely limited to the Judd property. Based on this information, it is possible that a new replacement supply well can be successfully installed on site; however, no absolute guarantee can be made due to the nature of the spill and presence of residual contamination.

Based on available information, **R.E.A.** recommends the following:

1. Prior to installation of a replacement well, the area of the proposed well should be investigated to insure the area has not been impacted by the spill. Soil in this area should be excavated to the top of bedrock and screened in the field for the possible presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID).

2. The existing supply well should be replaced with a new supply well that is constructed to prevent contaminant migration from the upper bedrock formation and/or along the well casing. At a minimum, 60 feet of well casing should be grouted into the upper bedrock formation. At this time **R.E.A.** anticipates that the total depth of the new well will be approximately 300 feet; however, the actual depth will depend on site specific conditions at the time of installation.
3. Following the installation of the new supply well, a sample should be collected for laboratory analysis. The sample should be analyzed for the possible presence of VOCs in accordance with EPA Method 524.2 and total coliform bacteria.
4. Based on review of the post-installation analytical results, the need for the continued operation of the POE treatment system should be evaluated. If no petroleum contamination is discovered in the new supply well, the use of the POE treatment system should be discontinued and the system should be removed from the Judd property.
5. The impacted supply well should be properly abandoned in accordance with VT DEC Water Supply Rules after the replacement well has been cleared for permanent use.
6. The need for additional source area remediation, such as soil vapor extraction (SVE), should be based on the finding of the exploratory test pitting (Item # 1) and post-installation analytical results for the new replacement supply well (Item #3). If the installation of a new contaminant-free supply well is successful, no further investigative work is likely to be required.

The significant findings of this assessment are summarized as follows:

- No VOCs were detected above laboratory detection limits in the drinking water samples collected from the supply wells serving the residences located at 4916 Nelson Hill Road (Kelley), 2007 Herrick Road (Noble), 2103 Nelson Hill Road (M. Judd) and 2005 Herrick Road (Lyndblom-Worthen).
- Benzene was detected in the influent sample collected from the POE treatment system serving the Judd residence at 14 micrograms per liter ( $\mu\text{g/L}$ ), which is above the Vermont Action Level (VAL). 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were also detected in the influent sample at concentrations of 16 and 5.7  $\mu\text{g/L}$ , respectively, which exceeds their corresponding Vermont Health Advisories (VHA). Several other petroleum-related compounds were also detected in the influent sample, but at concentrations below the corresponding VALs or VHAs.
- No VOCs were detected in the samples collected from the other POE treatment system samples (between and effluent), indicating that the GAC treatment system is working properly.
- Video inspection of the on-site supply well identified the likely point of contaminant entry to be at the drive shoe-bedrock interface, which is located approximately 20 feet below ground surface. Water seepage and staining was noted at the drive shoe.
- The video inspection identified fractures at the following depths: 90-91 feet (1/4 gpm), 150 feet (dry), 183 feet (2 -3 gpm) and 254 feet. No staining was associated with any of the deeper fractures.
- Petroleum odors were noted in the supply well during the video inspection, but no sheening

or free-phase petroleum was observed.

- No off-site sensitive receptors appear to be threatened or impacted by the petroleum spill or past operation of the former AST system.

## SITE INFORMATION

The Judd Residence is located at 5141 Nelson Hill Road in Derby, Vermont (**Figures 1 & 2 Attachment A**). The property encompasses approximately six acres. The house is constructed with a poured concrete basement and an attached two-bay garage. The former above ground storage tank (AST) was located approximately 75 feet southeast of the house adjacent to a storage shed and detached garage. The former UST, which was removed in June 2012, was located approximately five feet off the southeastern corner of the house. The Judd's also own the abutting property (approximately 30 acres) to the north, which is open farm land occupied by a windmill. The surrounding land use is predominantly farm and residential. The site layout and significant site features are shown on **Figure 3, Attachment A**.

Drinking water for the site is provided by an on-site private well, which is located adjacent to the backside of the house approximately 110 feet north of the former AST. Based on review of the Well Completion report (Well Tag # 28438), the Judd well is reported to be approximately 295 feet deep with an estimated yield of three gallons per minute (gpm). The Well Completion report also indicates that the overburden is approximately ten feet thick and that the casing was extended to approximately twenty feet below ground surface. The on-site supply well has been impacted by petroleum contamination, which appears to be related to the AST spill and not from the use of the former fuel-oil UST that was removed in June 2012.

The Judd property is located on apparent bedrock high known as Nelson Hill with an average elevation of 1,600 feet above mean sea level. The ground surface immediately surrounding the house and area of the former AST is generally flat, but the ground surface further to the east, south and west slopes downward. The nearest surface water body to the former AST system is a private on-site pond, located approximately 100 feet downgradient to the west of the site which is surrounded by a Class 2 Vermont Significant Wetland. There are also a number of other small Class 2 Vermont Significant Wetlands within a 0.5 mile radius of the former AST. The geographic coordinates of the site are: latitude 44° 59' 22.42" North and longitude 72° 20' 20.18" West.

The bedrock geology in the vicinity of the Judd residence is mapped as the Carbonaceous phyllite and limestone member (DSw) of the Waits River Formation consisting of dark-gray to silvery-gray, lustrous, carbonaceous muscovite-biotite-quartz ( $\pm$ garnet) phyllite containing abundant beds of punky-brown-weathering, dark-bluish-gray micaceous quartz rich limestone of Lower Devonian and Upper Silurian age (Ratcliffe et al, 2011). Surficial geology underlying the site is predominantly classified as glacial till (Stewart and MacClintock, 1970).

## VIDEO INSPECTION

On 7 August 2012, a video inspection of the supply well serving the Judd residence was performed by Gosselin Water Wells of Derby, Vermont under the supervision of an **R.E.A.** Field Scientist. Review of the video tape identified a small amount of water seeping into the well at the drive shoe, which exhibited signs of staining. Several fractures were noted in the well, but no staining was associated with any of the deeper fractures. Based on this information and the fact that only 20 feet

of casing was installed when the well was originally installed, the likely point of entry of the gasoline contamination is at the drive shoe-bedrock interface.

The video inspection identified fractures at the following depths: 90-91 feet (1/4 gpm), 150 feet (dry), 183 feet (2 -3 gpm) and 254 feet. No staining or visual evidence of contaminant entry was noted at these fractures; however, these fractures may act as pathways for contaminant migration into the deeper bedrock formation under static non-pumping conditions.

The video camera was lowered in the well after lowering the water level using the existing pump. The drive shoe-bedrock interface and borehole walls were inspected for evidence of contamination and/or seepage points. In addition, the locations of fractures (water bearing and dry zones) were noted with along with corresponding depth. A copy of the video inspection report is included in **Attachment C**.

### **POE TREATMENT SYSTEM SAMPLING & ANALYSIS**

A granular activated carbon (GAC) POE water treatment system is in use at the Judd Residence, which was installed in May 2012 by Vermont Water treatment of Bristol, Vermont. Recent water quality testing of the GAC treatment system indicates the system is working properly. Review of water quality data from the Judd on-site supply well collected between April and August 2012 indicates that the total contaminant concentrations have been relatively consistent ranging between 259 and 391 micrograms per liter ( $\mu\text{g/L}$ ) with slight variations for individual compounds.

On 8 August 2012, three water samples were collected from the POE treatment system. Benzene was detected in the influent sample at 14  $\mu\text{g/L}$ , which is above the Vermont Action Level (VAL). 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were also detected in the influent sample at concentrations of 16 and 5.7  $\mu\text{g/L}$ , respectively, which exceeds their corresponding Vermont Health Advisories (VHA). Several other petroleum-related compounds were also detected in the influent sample, but at concentrations below the corresponding VALs or VHAs. No VOCs were detected in the samples collected from the other treatment system samples (between and effluent), indicating that the GAC treatment system is working properly. The analytical results are summarized on the table and time-series graph summarizing the Judd supply well data are included in **Attachment D**.

Three water samples were collected on 8 August 2012 from the treatment system, which was installed by Vermont Water Treatment on 26 May 2012. The treatment system samples were labeled as Influent (influent from well), Between (port after first carbon canister), and Effluent (port after second carbon canister). All of the samples were analyzed for the possible presence of volatile organic compounds in accordance with EPA Method 524.2. The treatment system samples were analyzed by AMRO Environmental Laboratories Corporation of Merrimack, New Hampshire

### **SENSITIVE RECEPTOR EVALUATION**

There are 18 private wells within a 0.5 mile radius of the site, with the closest (excluding the on-site well) being approximately 400 feet north of the former UST. The Judd Property and the 0.5 mile radius surrounding the former AST are located completely within Zone 2 of the Derby Line Village Water District (WSID#20568) Source Protection Area (SPA)<sup>1</sup>. Zone 3 of the Beebe Plain Water

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<sup>1</sup> **Zone 1** includes the area within a 200' radius of the supply well. **Zone 2** includes the area where groundwater flows to the source outside of Zone 1, and where there would be probable impacts to the water supply from potential

System (WSID#5625) also abuts the 0.5 mile radius (**Figure 2, Attachment A**). Based on available information none of the off-site sensitive receptors appear to be threatened or impacted by the petroleum spill or past operation of the former AST system.

On 8 August 2012, water samples were collected from three bedrock supply wells serving nearby homes: Kelley (4916 Nelson Hill Road), Noble (2007 Herrick Road) and M. Judd (2103 Nelson Hill Road). One sample was also collected on 13 August 2012 from the supply well serving the Lyndblom-Worthen residence (2005 Herrick Road). No volatile organic compounds (VOCs) were detected in any of the water samples collected from the off-site supply wells. The approximate locations of these supply wells are shown on **Figure 4 in Attachment A** and laboratory analytical reports for the samples collected in August 2012 are included in **Attachment E**. Copies of the Well Completion Reports are included in **Attachment F**; however, the location/addressing on the VT ANR database could not be confirmed.

Kelley (4916 Nelson Hill Road) – The supply well serving the Kelley residence is located approximately 650 feet southeast of the Judd property. This property is owned by Michael and Susan Judd and rented to James Kelley. The Well Completion Report (Well Tag # 448) indicates that this well is 150 feet deep with an estimated yield of 15 gpm. Twenty feet of casing was installed at this location and overburden is reported to be approximately five feet thick. A water-bearing fracture zone was noted between 138 and 142 feet bgs. No VOCs were detected in the sample collected from this supply well on 8 August 2012. Based on information included on the Well Completion Report (amount of casing, estimated yield and depth of the water bearing fracture), location relative to the Judd property and absence of petroleum contamination, this well is not likely to be impacted by the spill that occurred on the Judd property in 2011.

Noble (2007 Herrick Road) - The supply well serving the Noble residence is located approximately 1,200 feet west of the Judd property. This property is owned by Michael and Susan Judd and is rented to Jason Noble. The Well Completion Report (Well Tag # 28438) indicates that this well is 154 feet deep with an estimated yield of 20 gpm. Forty feet of casing was reportedly installed at this location and overburden is reported to be approximately five feet thick. A water-bearing fracture zone was noted between 136 and 138 feet bgs. No VOCs were detected in the sample collected from this supply well on 8 August 2012. Based on information included on the Well Completion Report (amount of casing, estimated yield and depth of the water bearing fracture), location relative to the Judd property and absence of petroleum contamination, this well is not likely to be impacted by the spill that occurred on the Judd property in 2011.

M. Judd (2103 Nelson Hill Road) - The supply well serving the Judd residence is located approximately 1,000 feet south of the Judd property. This property is owned by Michele Judd. The Well Completion Report (Well Tag # 191) indicates that this well is 300 feet deep with an estimated yield of 5 gpm. Twenty-five feet of casing was installed at this location and overburden is reported to be approximately 15 feet thick. No significant water-bearing fracture was noted on the Well Completion Report. No VOCs were detected in the sample collected from this supply well on 8 August 2012. Based on the location and reported depth of the well along with the absence of petroleum contamination, this well is not likely to be impacted by the spill that occurred on the Judd property in 2011.

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sources of contamination (PSOC). **Zone 3** includes the remaining recharge area outside of Zone 2, where there may be possible impacts from PSOC (VT DEC, Water Supply Division).

Lyndblom-Worthen residence (2005 Herrick Road) - The supply well serving the Lyndblom-Worthen residence is located approximately 800 feet southwest of the Judd property. This property is owned by Ms. Edie Lyndblom-Worthen and is operated as the Garden of Edie Bed and Breakfast. The Well Completion Report (Well Tag # 20446) indicates that this well is 350 feet deep with an estimated yield of 4 gpm. Twenty feet of casing was installed at this location and overburden is reported to be approximately eight feet thick. A water-bearing fracture zone was noted between 327 and 328 feet bgs. No VOCs were detected in the sample collected from this supply well on 13 August 2012. Based on the reported depth of the water bearing fracture (greater than 300 feet bgs), location of the well in relation to the Judd property and absence of petroleum contamination, this well is not likely to be impacted by the spill that occurred on the Judd property in 2011.

The supply well samples were collected from the kitchen faucets of each home after allowing the water to run for approximately ten minutes. The samples were analyzed for the possible presence of VOCs in accordance with EPA Method 524.2. The supply well samples were shipped under chain-of-custody in an ice filled cooler to AMRO Environmental Laboratories Corporation of Merrimack, New Hampshire for laboratory analysis.

## LIMITATIONS

The work was undertaken to assess environmental conditions specifically on the subject property in accordance with generally accepted engineering and hydrogeological practices. No other warranty, express or implied, is made. Absolute assurance that any and all possible contamination at the site was identified cannot be provided.

The report conclusions are based, in part, on information provided by the client, their agents, or third parties, including state or local officials. **R.E.A.** assumes no responsibility for the accuracy and completeness of the information. Where visual observations are included in the report, they represent conditions at the time of the inspection, and may not be indicative of past or future site conditions

\*\*\*\*\*

Please call me if you have any questions or concerns regarding this work.

Sincerely,

***Ross Environmental Associates, Inc.***



Robert J. Ross, CGWP  
Principal Hydrogeologist

## Attachments

cc. Ms. Linda Elliot - VT DEC [Linda.Elliott@state.vt.us](mailto:Linda.Elliott@state.vt.us)  
Ms. Chris Masciantonio - Hanover Insurance [CMASCIANTON@hanover.com](mailto:CMASCIANTON@hanover.com)  
Mr. Denise Percy – FPH  
Mr. Scott Klark - Axelrod & Adler

Rjr/ref: 32073Rpt01.doc

# ATTACHMENT A

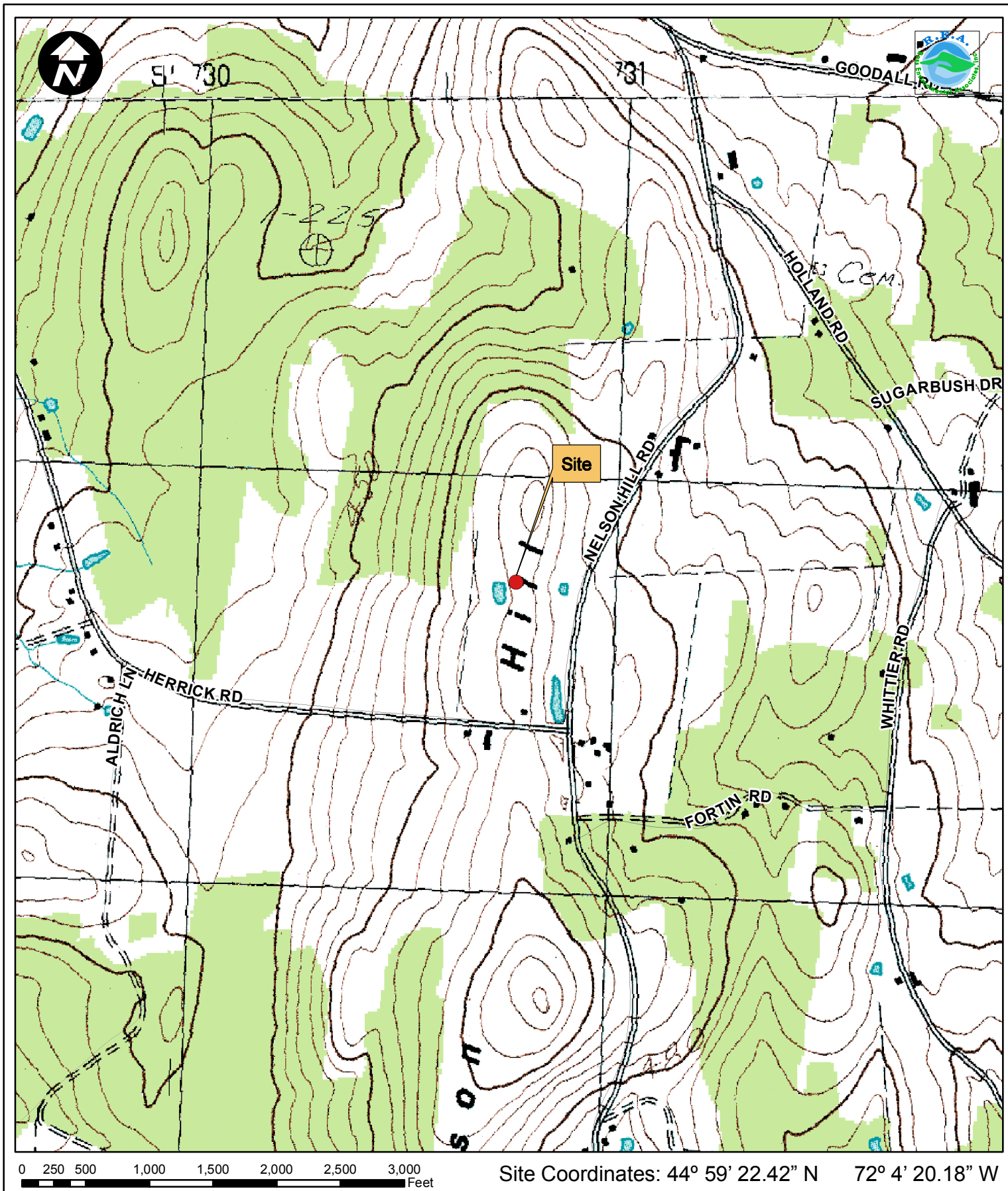
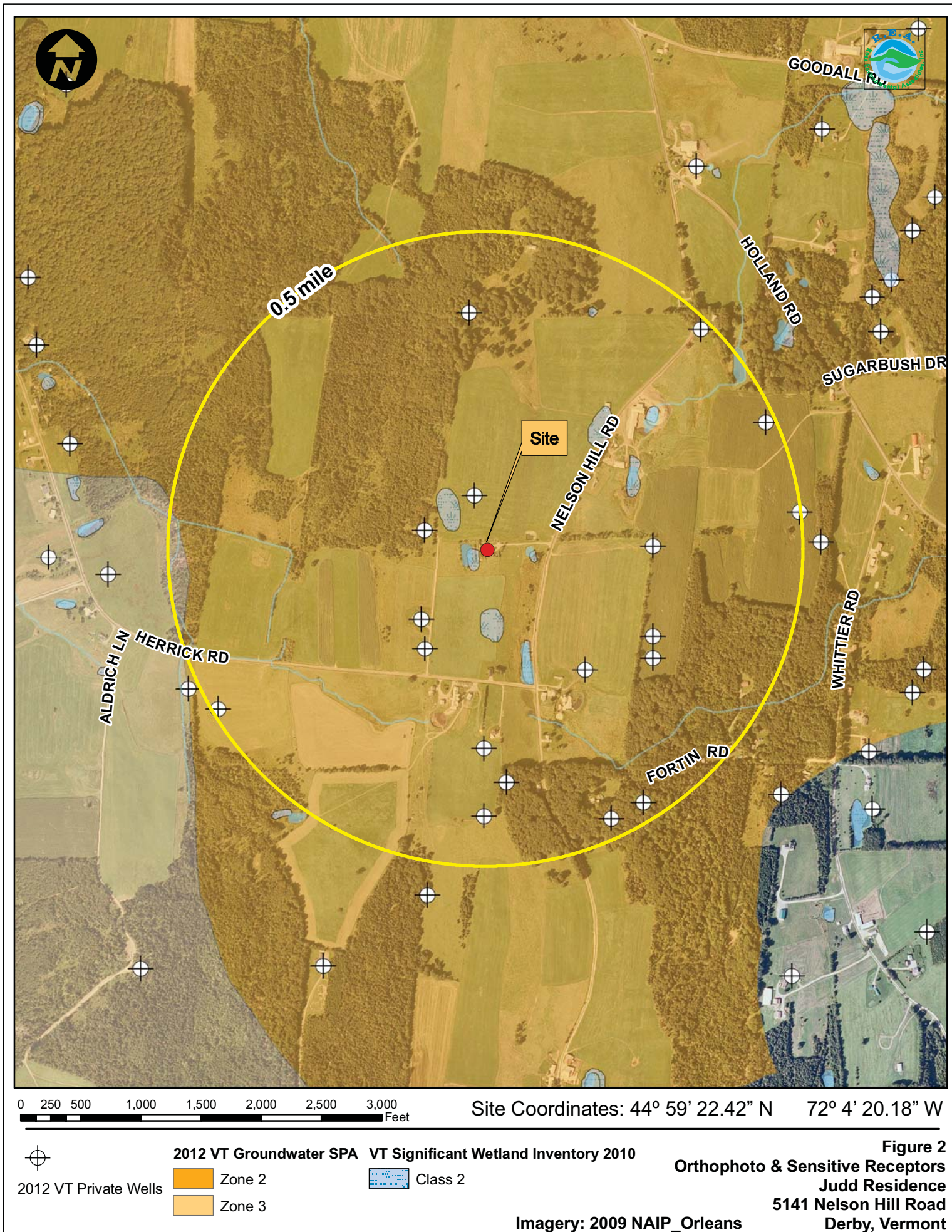
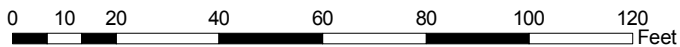
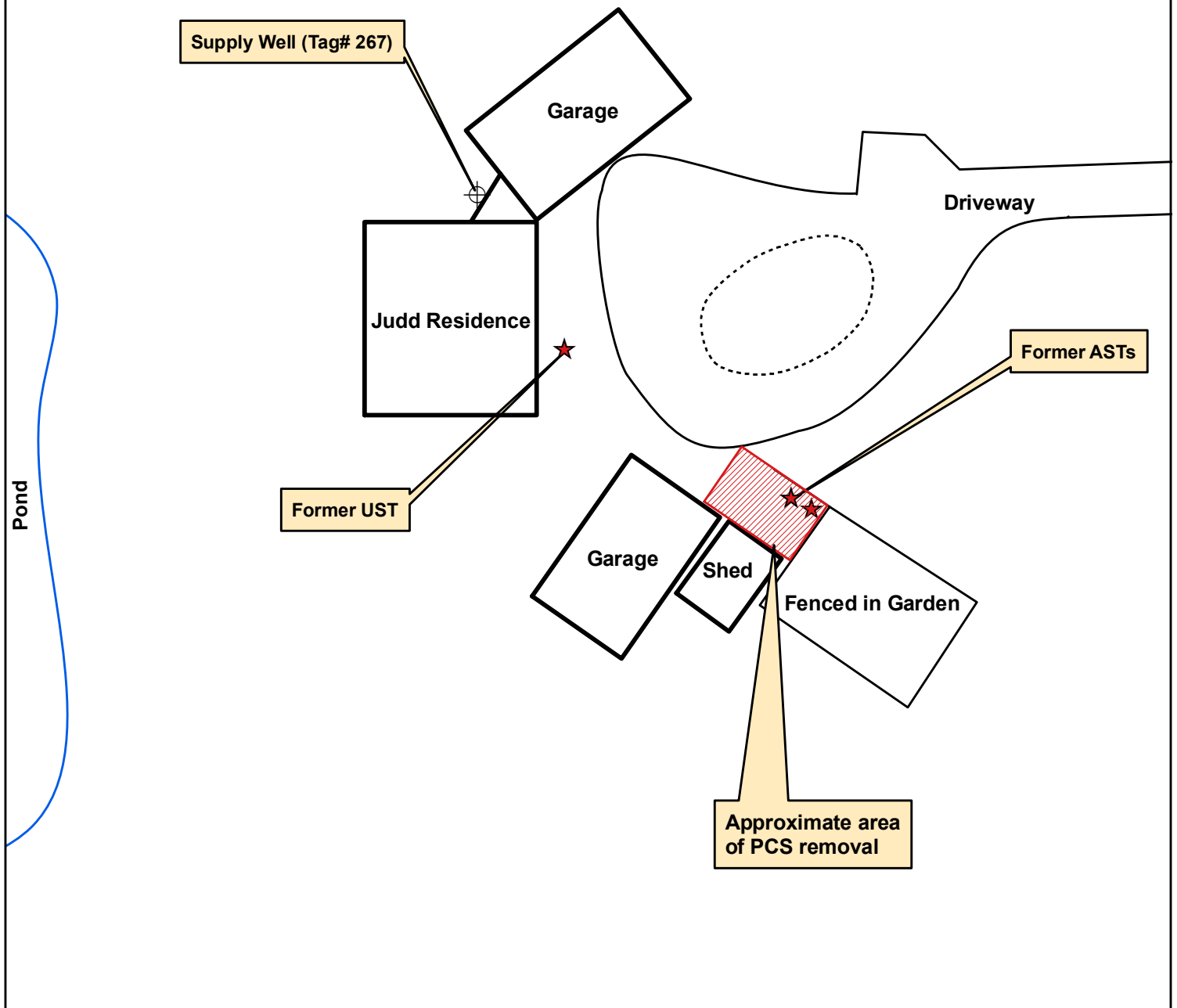


Figure 1  
USGS Map  
Judd Residence  
5141 Nelson Hill Road  
Derby, Vermont







Site Coordinates: 44° 59' 22.42" N 72° 4' 20.18" W



**Supply Well**



**Former Fuel Tank**

**Figure 3**  
**Site Plan**  
**Judd Residence**  
**5141 Nelson Hill Road**  
**Derby, Vermont**





Noble Well (Tag# 28438)  
2007 Herrick Rd.

Judd Well (Tag# 267)  
5141 Nelson Hill Rd.

Former UST

Former AST

Judd Well #2 (Tag# 191)  
2103 Nelson Hill Rd.

Kelley Well (Tag# 448)  
4619 Nelson Hill Rd.

Lyndblom-Worthen Well (Tag# 20446)  
2005 Herrick Rd.

0 125 250 500 750 Feet

Site Coordinates: 44° 59' 22.42" N 72° 4' 20.18" W



**Supply Well**



**Former Fuel Tank**

**Figure 4**  
**Nearby Supply Well Locations**  
Judd Residence  
5141 Nelson Hill Road  
Derby, Vermont

Imagery: 2009 NAIP\_Orleans

# ATTACHMENT B





Photograph 1. Site Overview – View toward west.



Photograph 2. On-site Supply Well. – View toward south.



Photograph 3. Area of former AST – View toward south.



Photograph 4. Area of former AST – View toward southeast.



Photograph 5. Location of UST before removal – View toward north.



Photograph 6. UST excavation after removal of tank - View toward northwest.

# ATTACHMENT



P. O. Box 439  
193 Gosselin Drive  
Derby, VT 05629

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1-800-287-8818

August 13, 2012

To: Ross Environmental  
Attn: Bob Ross

RE: Camera Investigation -- Judd Job

Well Stats:  
295' Deep  
20' Casing  
3 GPM  
24' Static Level

Fractures  
90'-91' -- ¼ gpm  
150' -- Dry  
183' -- 2-3 GPM  
254' -- Top of Pump

After reviewing tape it appears that a small amount of water is seeping around the drive shoe (contamination seal). There is also some staining that begins at the shoe and goes down the side of the borehole. We believe this is where the contamination is coming from. Lower fractures show no staining. A sleeve could be installed with 2 Jawsell seals at the bottom to a depth of 40'. However we would recommend that the space between the seal and the casing be grouted. This would have to be done with a 3" sleeve instead of 4". This would allow more room for grout. The pump would have to be changed to a 3" diameter pump. We would have to look into the sleeve and pump size because we have never installed 3". The other problem is the roof overhang. Ideally we would use 20' bell end pipe. The roof forces us to cut the pipe causing us to use coupling every 7'-8'. This would be an obstruction for a tremie pipe. We would probably have to use benseal and pour it down the outside of the sleeve. Would it get to the seal? No way of knowing. So the seal may work but no guarantees. We would recommend that this hole be abandoned with hole plug and a new well installed. We would put in extra casing, minimum of 40' and grout the annular space with bentonite. Let me know how you would like to proceed

Sincerely,

Dan Gosselin  
GOSSELIN WATER WELLS, INC.

# ATTACHMENT



[dec home](#) > [wsd home](#)

- Critical Infrastructure Protection Information
- Permit, Certification & License Application Forms & Information
- Water System Capacity Development & DWSRF
- Well Driller & Well Location Program
- Source Water Protection
- Water System Operators
- Drinking Water Quality
- The TNC Handbook
- Rules and Regulations
- Staff Directory
- News
- Other Links of Interest
- Agency of Natural Resources GIS Internet Mapping

## Well Details

Date Completed	
Date Received	03/15/1982
Driller	174 - Daniel Gosselin , Gosselin Artesian Well Co Inc
Well Report Number	267
Tag	
Comments	YIELD TEST DATA - 3 GPM AT 295 FT.
Town	Derby
Map Cell	51C4
Tax Map	
E911 Address	
Subdivision	
Lot Number	
Owners First Name	MICHAEL
Owners Last Name	JUDD
Purchaser First Name	
Purchaser Last Name	
Well Use	Domestic
Well Reason	Replace existing supply
Drilling Method	Rotary (AP)
Well Depth	295.00 feet
Yield Gallons Per Minute	3.00
Yield Test Tested For Hours	0.00
Static Water Level	15.00 feet
Over Flowing	no
Overburden Thickness	10 feet
Casing Length	20.00 feet
Casing Diameter	6.00 inches
Casing Length Below Land Surface	0.00 feet
Casing Length Exposed	0.00
Casing Material	
Casing Weight	0.00 lbs/foot
Casing Finish	Above ground, finished
Liner Length	0.00 feet
Liner Diameter	0.00 inches
Liner Material	
Liner Weight	0.00 lbs/foot
Grout Type	
Seal Type	
Diameter Drilled In Bedrock	0.00 inches
Depth Drilled in Bedrock	0.00 feet
Screen Make Type	
Screen Material	
Screen Length	0.00 feet
Screen Diameter	0.00 inches
Screen Slot Size	0.000 inches
Depth of Screen	0.00 feet
Gravel Size Type	
Casing Sealing Method	Drive shoe only
Yield Test Method	
Well Development	
Not Steel Casing	no
Water Analysis	no
Well Screen	no
AW Partial	no
Unique GIS Name	DC267
Lat Degree	44
Lat Minutes	59
Lat Seconds	26.9220
Long Degree	72
Long Minutes	4
Long Seconds	21.6456
Location Determination Method	screen digitized

### Quick Links

- » [List of Vermont Licensed Well Drillers](#)
- » [Well Driller Licensing Rule PDF](#)
- » [Well Driller License forms](#)
- » [Current Nationwide Threat Level: Yellow](#)

Well Type  
 Depth To Liner Top 0.00  
 Hydro Fractured no  
 Hydro Fractured Resulting Flow 0.00  
 Well Location Submitted As A Dot On A Map N

WellMainRecordNumber	StartingDepth	EndingDepth	WaterBearing	LithologyCode	LithologyDescription
15239	0.00	10.00			loam
15239	10.00	295.00	R		ledge

If you would like search for a well or wells in a specific area the following link will relocate you to the ANR GIS Internet Mapping Program.

<http://www.anr.state.vt.us/site/html/maps.htm>



[www.VermontDrinkingWater.org](http://www.VermontDrinkingWater.org)

VT DEC Water Supply Division 13 South Main Street, Old Pantry Building Waterbury, VT 5671-43  
 Telephone toll-free in VT: 800-823-6500 or call 8: 2-241-3400 Fax: 8: 2-241-3284

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## SUPPLY WELL ANALYTICAL RESULTS

Judd Residence - Treatment System  
Derby, Vermont

Monitoring Date: 8 August 2012

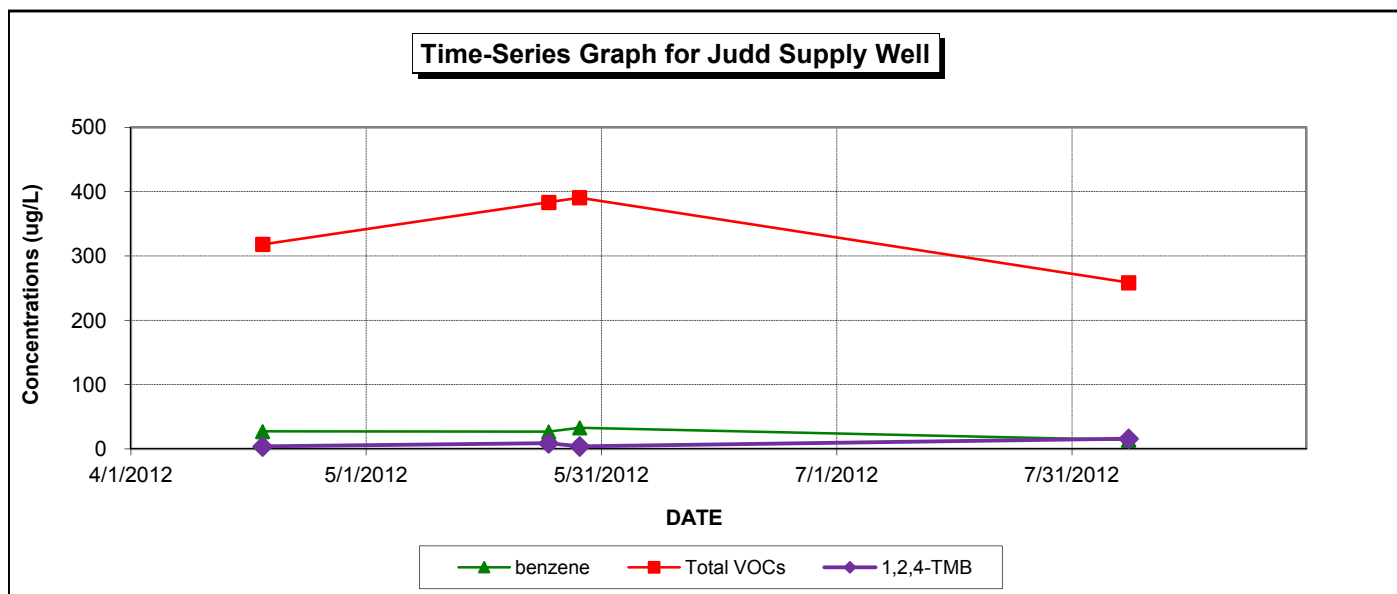
Parameter	VGES	VAL	VHA	influent	between	effluent	Trip Blank
MtBE	40	--	40	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Benzene	5.0	1.0	--	14	ND<0.5	ND<0.5	ND<0.5
Toluene	1,000	--	--	28	ND<0.5	ND<0.5	ND<0.5
Ethylbenzene	700	--	--	12	ND<0.5	ND<0.5	ND<0.5
Total Xylenes	10,000	--	--	181	ND<0.5	ND<0.5	ND<0.5
1,3,5-trimethylbenzene	350	--	4.0	5.7	ND<0.5	ND<0.5	ND<0.5
1,2,4-trimethylbenzene		--	5.0	16	ND<0.5	ND<0.5	ND<0.5
Naphthalene	20	--	20	ND<0.5	ND<0.5	ND<0.5	ND<0.5
chloroform	---	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5
isopropylbenzene	---	--	--	1.10	ND<0.5	ND<0.5	ND<0.5
n-propylbenzene	---	--	--	0.83	ND<0.5	ND<0.5	ND<0.5
Total VOCs*	--	--	--	259	ND	ND	ND

Notes:

All results reported as micrograms per liter (µg/L), unless indicated otherwise.

ND: None detected at indicated detection limit.

Shaded values indicate exceedance of Vermont Groundwater Enforcement Standard (VGES), Vermont Action Level (VAL) and/or Vermont Health Advisory (VHA)



### Summary of Supply Well Analytical Results for Judd Residence

Judd Residence  
Derby, Vermont

Date	chloro- form	MTBE	benzene	toluene	ethyl benzene	total xylenes	1,3,5-TMB	1,2,4-TMB	naphtha- lene	Total VOCs
4/18/2012	1.3	ND<0.5	27.4	134	ND<0.5	150	1.3	4.0	ND<0.5	318
5/25/2012	ND<0.5	ND<0.5	26.9	111	18.4	214	2.9	8.9	ND<0.5	383
5/29/2012	4.0	ND<0.5	33.0	140	20	188	ND<0.5	4.3	ND<0.5	391
8/8/2012	ND<0.5	ND<0.5	14.0	28	12	181	5.7	16.0	ND<0.5	259
<b>VGES</b>		40	5.0	1,000	700	10,000	350		20	---
<b>VAL</b>	--	--	1.0	--	--	--	--	--	--	--
<b>VHA</b>	--	40		--	--	--	4.0	5.0	20	--

Notes: Results given in micrograms per liter (µg/L), unless indicated otherwise.  
 ND- None detected at indicated detection limit.  
 Shaded values indicate exceedance of Vermont Groundwater Enforcement Standard (VGES),  
 Vermont Action Level (VAL) and/or Vermont Health Advisory (VHA)  
 On 25 May 2012 isopropylbenzene and n-propylbenzene were detected at 0.6 ug/L, respectively.  
 On 29 May 2012 isopropylbenzene and n-propylbenzene were detected at 0.67 and 0.58 ug/L, respectively  
 On 8 August 2012 isopropylbenzene and n-propylbenzene were detected at 1.1 and 0.83 ug/L, respectively

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**CLIENT:** Ross Environmental Associates  
**Project:** 32-073 Judd Residence  
**Lab Order:** 1208029  
**Date Received:** 8/9/2012

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**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Collection Date</b>	<b>Collection Time</b>
1208029-01A	Influent	8/8/2012	1:10 PM
1208029-02A	Between	8/8/2012	1:15 PM
1208029-03A	Effluent	8/8/2012	1:20 PM
1208029-04A	Kelly	8/8/2012	12:45 PM
1208029-05A	Michele	8/8/2012	2:00 PM
1208029-06A	Noble	8/8/2012	12:37 PM
1208029-07A	TB	8/8/2012	3:10 PM

## DATA COMMENT PAGE

### Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative

### Micro Data Qualifiers

TNTC	Too numerous to count
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### Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

#### Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208029  
**Project:** 32-073 Judd Residence  
**Lab ID:** 1208029-01A

**Client Sample ID:** Influent  
**Collection Date:** 8/8/2012 1:10:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: SK
Acetone	ND	10		µg/L	1	8/17/2012 1:03:00 AM
Acrylonitrile	ND	1.0		µg/L	1	8/17/2012 1:03:00 AM
Benzene	14	0.50		µg/L	1	8/17/2012 1:03:00 AM
Bromobenzene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Bromochloromethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Bromodichloromethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Bromoform	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
2-Butanone	ND	10		µg/L	1	8/17/2012 1:03:00 AM
n-Butylbenzene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
sec-Butylbenzene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
tert-Butylbenzene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Carbon disulfide	ND	1.0		µg/L	1	8/17/2012 1:03:00 AM
Carbon tetrachloride	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Chlorobenzene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Chloroethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Chloroform	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Chloromethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
2-Chlorotoluene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
4-Chlorotoluene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Dibromochloromethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/17/2012 1:03:00 AM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Dibromomethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/17/2012 1:03:00 AM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Diethyl ether	ND	2.0		µg/L	1	8/17/2012 1:03:00 AM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208029  
**Project:** 32-073 Judd Residence  
**Lab ID:** 1208029-01A

**Client Sample ID:** Influent  
**Collection Date:** 8/8/2012 1:10:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	12	0.50		µg/L	1	8/17/2012 1:03:00 AM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
2-Hexanone	ND	10		µg/L	1	8/17/2012 1:03:00 AM
Isopropylbenzene	1.1	0.50		µg/L	1	8/17/2012 1:03:00 AM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Methylene chloride	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/17/2012 1:03:00 AM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Naphthalene	ND	2.0		µg/L	1	8/17/2012 1:03:00 AM
n-Propylbenzene	0.83	0.50		µg/L	1	8/17/2012 1:03:00 AM
Styrene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Tetrachloroethene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Tetrahydrofuran	ND	5.0		µg/L	1	8/17/2012 1:03:00 AM
Toluene	28	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/17/2012 1:03:00 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/17/2012 1:03:00 AM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Trichloroethene	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,2,4-Trimethylbenzene	16	0.50		µg/L	1	8/17/2012 1:03:00 AM
1,3,5-Trimethylbenzene	5.7	0.50		µg/L	1	8/17/2012 1:03:00 AM
Vinyl chloride	ND	0.50		µg/L	1	8/17/2012 1:03:00 AM
o-Xylene	91	5.0		µg/L	10	8/17/2012 3:57:00 PM
m,p-Xylene	90	5.0		µg/L	10	8/17/2012 3:57:00 PM
Surr: 1,2-Dichloroethane-d4	110	70-130		%REC	1	8/17/2012 1:03:00 AM
Surr: 4-Bromofluorobenzene	94.2	70-130		%REC	1	8/17/2012 1:03:00 AM
Surr: Dibromofluoromethane	82.4	70-130		%REC	1	8/17/2012 1:03:00 AM
Surr: Toluene-d8	84.3	70-130		%REC	1	8/17/2012 1:03:00 AM



**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208029  
**Project:** 32-073 Judd Residence  
**Lab ID:** 1208029-02A

**Client Sample ID:** Between  
**Collection Date:** 8/8/2012 1:15:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: SK
Acetone	ND	10		µg/L	1	8/16/2012 9:31:00 PM
Acrylonitrile	ND	1.0		µg/L	1	8/16/2012 9:31:00 PM
Benzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Bromobenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Bromochloromethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Bromodichloromethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Bromoform	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
2-Butanone	ND	10		µg/L	1	8/16/2012 9:31:00 PM
n-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
sec-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
tert-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Carbon disulfide	ND	1.0		µg/L	1	8/16/2012 9:31:00 PM
Carbon tetrachloride	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Chlorobenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Chloroethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Chloroform	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Chloromethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
2-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
4-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Dibromochloromethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/16/2012 9:31:00 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Dibromomethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/16/2012 9:31:00 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Diethyl ether	ND	2.0		µg/L	1	8/16/2012 9:31:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** Between**Lab Order:** 1208029**Collection Date:** 8/8/2012 1:15:00 PM**Project:** 32-073 Judd Residence**Matrix:** AQUEOUS**Lab ID:** 1208029-02A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
2-Hexanone	ND	10		µg/L	1	8/16/2012 9:31:00 PM
Isopropylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Methylene chloride	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/16/2012 9:31:00 PM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Naphthalene	ND	2.0		µg/L	1	8/16/2012 9:31:00 PM
n-Propylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Styrene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Tetrachloroethene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Tetrahydrofuran	ND	5.0		µg/L	1	8/16/2012 9:31:00 PM
Toluene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 9:31:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 9:31:00 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Trichloroethene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Vinyl chloride	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
o-Xylene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
m,p-Xylene	ND	0.50		µg/L	1	8/16/2012 9:31:00 PM
Surr: 1,2-Dichloroethane-d4	92.2	70-130		%REC	1	8/16/2012 9:31:00 PM
Surr: 4-Bromofluorobenzene	89.6	70-130		%REC	1	8/16/2012 9:31:00 PM
Surr: Dibromofluoromethane	88.6	70-130		%REC	1	8/16/2012 9:31:00 PM
Surr: Toluene-d8	87.3	70-130		%REC	1	8/16/2012 9:31:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208029  
**Project:** 32-073 Judd Residence  
**Lab ID:** 1208029-03A

**Client Sample ID:** Effluent  
**Collection Date:** 8/8/2012 1:20:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: SK
Acetone	ND	10		µg/L	1	8/16/2012 8:56:00 PM
Acrylonitrile	ND	1.0		µg/L	1	8/16/2012 8:56:00 PM
Benzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Bromobenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Bromochloromethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Bromodichloromethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Bromoform	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
2-Butanone	ND	10		µg/L	1	8/16/2012 8:56:00 PM
n-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
sec-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
tert-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Carbon disulfide	ND	1.0		µg/L	1	8/16/2012 8:56:00 PM
Carbon tetrachloride	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Chlorobenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Chloroethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Chloroform	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Chloromethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
2-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
4-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Dibromochloromethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/16/2012 8:56:00 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Dibromomethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/16/2012 8:56:00 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Diethyl ether	ND	2.0		µg/L	1	8/16/2012 8:56:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208029  
**Project:** 32-073 Judd Residence  
**Lab ID:** 1208029-03A

**Client Sample ID:** Effluent  
**Collection Date:** 8/8/2012 1:20:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
2-Hexanone	ND	10		µg/L	1	8/16/2012 8:56:00 PM
Isopropylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Methylene chloride	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/16/2012 8:56:00 PM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Naphthalene	ND	2.0		µg/L	1	8/16/2012 8:56:00 PM
n-Propylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Styrene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Tetrachloroethene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Tetrahydrofuran	ND	5.0		µg/L	1	8/16/2012 8:56:00 PM
Toluene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 8:56:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 8:56:00 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Trichloroethene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Vinyl chloride	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
o-Xylene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
m,p-Xylene	ND	0.50		µg/L	1	8/16/2012 8:56:00 PM
Surr: 1,2-Dichloroethane-d4	91.4	70-130		%REC	1	8/16/2012 8:56:00 PM
Surr: 4-Bromofluorobenzene	90.9	70-130		%REC	1	8/16/2012 8:56:00 PM
Surr: Dibromofluoromethane	86.1	70-130		%REC	1	8/16/2012 8:56:00 PM
Surr: Toluene-d8	86.3	70-130		%REC	1	8/16/2012 8:56:00 PM

# ATTACHMENT

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**CLIENT:** Ross Environmental Associates  
**Project:** 32-073 Judd Farm  
**Lab Order:** 1208045  
**Date Received:** 8/14/2012

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**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Collection Date</b>	<b>Collection Time</b>
1208045-01A	Lyndblom	8/13/2012	11:50 AM

## DATA COMMENT PAGE

### Organic Data Qualifiers

ND	Indicates compound was analyzed for, but not detected at or above the reporting limit.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than the method detection limit.
H	Method prescribed holding time exceeded.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
B	This flag is used when the analyte is found in the associated blank as well as in the sample.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
#	See Case Narrative

### Micro Data Qualifiers

TNTC	Too numerous to count
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### Inorganic Data Qualifiers

ND or U	Indicates element was analyzed for, but not detected at or above the reporting limit.
J	Indicates a value greater than or equal to the method detection limit, but less than the quantitation limit.
H	Indicates analytical holding time exceedance.
B	Indicates that the analyte is found in the associated blank, as well as in the sample.
MSA	Indicates value determined by the Method of Standard Addition
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
R	RPD outside accepted recovery limits
RL	Reporting limit; defined as the lowest concentration the laboratory can accurately quantitate.
S	Spike Recovery outside accepted recovery limits.
PS	The analyte was below the Reporting Limit but has significant matrix interference as noted by the poor recovery of the Post Digestion Spike.
#	See Case Narrative
*	MCL Exceeded

#### Report Comments:

1. Soil, sediment and sludge sample results are reported on a "dry weight" basis.
2. Reporting limits are adjusted for sample size used, dilutions and moisture content, if applicable.

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** Lyndblom**Lab Order:** 1208045**Collection Date:** 8/13/2012 11:50:00 AM**Project:** 32-073 Judd Farm**Matrix:** AQUEOUS**Lab ID:** 1208045-01A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: SK
Acetone	ND	10		µg/L	1	8/17/2012 2:44:00 PM
Acrylonitrile	ND	1.0		µg/L	1	8/17/2012 2:44:00 PM
Benzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Bromobenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Bromochloromethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Bromodichloromethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Bromoform	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
2-Butanone	ND	10		µg/L	1	8/17/2012 2:44:00 PM
n-Butylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
sec-Butylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
tert-Butylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Carbon disulfide	ND	1.0		µg/L	1	8/17/2012 2:44:00 PM
Carbon tetrachloride	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Chlorobenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Chloroethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Chloroform	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Chloromethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
2-Chlorotoluene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
4-Chlorotoluene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Dibromochloromethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/17/2012 2:44:00 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Dibromomethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2-Dichlorobenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Diethyl ether	ND	2.0		µg/L	1	8/17/2012 2:44:00 PM



**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208045  
**Project:** 32-073 Judd Farm  
**Lab ID:** 1208045-01A

**Client Sample ID:** Lyndblom  
**Collection Date:** 8/13/2012 11:50:00 AM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
2-Hexanone	ND	10		µg/L	1	8/17/2012 2:44:00 PM
Isopropylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Methylene chloride	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/17/2012 2:44:00 PM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Naphthalene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
n-Propylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Styrene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Tetrachloroethene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Tetrahydrofuran	ND	5.0		µg/L	1	8/17/2012 2:44:00 PM
Toluene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2,3-Trichlorobenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2,4-Trichlorobenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Trichloroethene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Vinyl chloride	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
o-Xylene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
m,p-Xylene	ND	0.50		µg/L	1	8/17/2012 2:44:00 PM
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	8/17/2012 2:44:00 PM
Surr: 4-Bromofluorobenzene	92.7	70-130		%REC	1	8/17/2012 2:44:00 PM
Surr: Dibromofluoromethane	93.9	70-130		%REC	1	8/17/2012 2:44:00 PM
Surr: Toluene-d8	87.3	70-130		%REC	1	8/17/2012 2:44:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208029  
**Project:** 32-073 Judd Residence  
**Lab ID:** 1208029-04A

**Client Sample ID:** Kelly  
**Collection Date:** 8/8/2012 12:45:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: <b>SK</b>
Acetone	ND	10		µg/L	1	8/16/2012 10:05:00 PM
Acrylonitrile	ND	1.0		µg/L	1	8/16/2012 10:05:00 PM
Benzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Bromobenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Bromochloromethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Bromodichloromethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Bromoform	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
2-Butanone	ND	10		µg/L	1	8/16/2012 10:05:00 PM
n-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
sec-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
tert-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Carbon disulfide	ND	1.0		µg/L	1	8/16/2012 10:05:00 PM
Carbon tetrachloride	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Chlorobenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Chloroethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Chloroform	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Chloromethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
2-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
4-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Dibromochloromethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/16/2012 10:05:00 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Dibromomethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/16/2012 10:05:00 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Diethyl ether	ND	2.0		µg/L	1	8/16/2012 10:05:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** Kelly**Lab Order:** 1208029**Collection Date:** 8/8/2012 12:45:00 PM**Project:** 32-073 Judd Residence**Matrix:** AQUEOUS**Lab ID:** 1208029-04A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
2-Hexanone	ND	10		µg/L	1	8/16/2012 10:05:00 PM
Isopropylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Methylene chloride	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/16/2012 10:05:00 PM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Naphthalene	ND	2.0		µg/L	1	8/16/2012 10:05:00 PM
n-Propylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Styrene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Tetrachloroethene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Tetrahydrofuran	ND	5.0		µg/L	1	8/16/2012 10:05:00 PM
Toluene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 10:05:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 10:05:00 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Trichloroethene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Vinyl chloride	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
o-Xylene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
m,p-Xylene	ND	0.50		µg/L	1	8/16/2012 10:05:00 PM
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%REC	1	8/16/2012 10:05:00 PM
Surr: 4-Bromofluorobenzene	90.0	70-130		%REC	1	8/16/2012 10:05:00 PM
Surr: Dibromofluoromethane	88.1	70-130		%REC	1	8/16/2012 10:05:00 PM
Surr: Toluene-d8	85.8	70-130		%REC	1	8/16/2012 10:05:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates  
**Lab Order:** 1208029  
**Project:** 32-073 Judd Residence  
**Lab ID:** 1208029-05A

**Client Sample ID:** Michele  
**Collection Date:** 8/8/2012 2:00:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: <b>SK</b>
Acetone	ND	10		µg/L	1	8/16/2012 10:41:00 PM
Acrylonitrile	ND	1.0		µg/L	1	8/16/2012 10:41:00 PM
Benzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Bromobenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Bromochloromethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Bromodichloromethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Bromoform	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
2-Butanone	ND	10		µg/L	1	8/16/2012 10:41:00 PM
n-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
sec-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
tert-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Carbon disulfide	ND	1.0		µg/L	1	8/16/2012 10:41:00 PM
Carbon tetrachloride	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Chlorobenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Chloroethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Chloroform	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Chloromethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
2-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
4-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Dibromochloromethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/16/2012 10:41:00 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Dibromomethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/16/2012 10:41:00 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Diethyl ether	ND	2.0		µg/L	1	8/16/2012 10:41:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** Michele**Lab Order:** 1208029**Collection Date:** 8/8/2012 2:00:00 PM**Project:** 32-073 Judd Residence**Matrix:** AQUEOUS**Lab ID:** 1208029-05A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
2-Hexanone	ND	10		µg/L	1	8/16/2012 10:41:00 PM
Isopropylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Methylene chloride	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/16/2012 10:41:00 PM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Naphthalene	ND	2.0		µg/L	1	8/16/2012 10:41:00 PM
n-Propylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Styrene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Tetrachloroethene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Tetrahydrofuran	ND	5.0		µg/L	1	8/16/2012 10:41:00 PM
Toluene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 10:41:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 10:41:00 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Trichloroethene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Vinyl chloride	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
o-Xylene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
m,p-Xylene	ND	0.50		µg/L	1	8/16/2012 10:41:00 PM
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%REC	1	8/16/2012 10:41:00 PM
Surr: 4-Bromofluorobenzene	90.7	70-130		%REC	1	8/16/2012 10:41:00 PM
Surr: Dibromofluoromethane	84.9	70-130		%REC	1	8/16/2012 10:41:00 PM
Surr: Toluene-d8	86.8	70-130		%REC	1	8/16/2012 10:41:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** Noble**Lab Order:** 1208029**Collection Date:** 8/8/2012 12:37:00 PM**Project:** 32-073 Judd Residence**Matrix:** AQUEOUS**Lab ID:** 1208029-06A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: <b>SK</b>
Acetone	ND	10		µg/L	1	8/16/2012 11:16:00 PM
Acrylonitrile	ND	1.0		µg/L	1	8/16/2012 11:16:00 PM
Benzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Bromobenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Bromochloromethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Bromodichloromethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Bromoform	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
2-Butanone	ND	10		µg/L	1	8/16/2012 11:16:00 PM
n-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
sec-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
tert-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Carbon disulfide	ND	1.0		µg/L	1	8/16/2012 11:16:00 PM
Carbon tetrachloride	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Chlorobenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Chloroethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Chloroform	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Chloromethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
2-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
4-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Dibromochloromethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/16/2012 11:16:00 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Dibromomethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/16/2012 11:16:00 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Diethyl ether	ND	2.0		µg/L	1	8/16/2012 11:16:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** Noble**Lab Order:** 1208029**Collection Date:** 8/8/2012 12:37:00 PM**Project:** 32-073 Judd Residence**Matrix:** AQUEOUS**Lab ID:** 1208029-06A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
2-Hexanone	ND	10		µg/L	1	8/16/2012 11:16:00 PM
Isopropylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Methylene chloride	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/16/2012 11:16:00 PM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Naphthalene	ND	2.0		µg/L	1	8/16/2012 11:16:00 PM
n-Propylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Styrene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Tetrachloroethene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Tetrahydrofuran	ND	5.0		µg/L	1	8/16/2012 11:16:00 PM
Toluene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 11:16:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 11:16:00 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Trichloroethene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Vinyl chloride	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
o-Xylene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
m,p-Xylene	ND	0.50		µg/L	1	8/16/2012 11:16:00 PM
Surr: 1,2-Dichloroethane-d4	94.1	70-130		%REC	1	8/16/2012 11:16:00 PM
Surr: 4-Bromofluorobenzene	91.1	70-130		%REC	1	8/16/2012 11:16:00 PM
Surr: Dibromofluoromethane	87.3	70-130		%REC	1	8/16/2012 11:16:00 PM
Surr: Toluene-d8	86.8	70-130		%REC	1	8/16/2012 11:16:00 PM

**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** TB**Lab Order:** 1208029**Collection Date:** 8/8/2012 3:10:00 PM**Project:** 32-073 Judd Residence**Matrix:** AQUEOUS**Lab ID:** 1208029-07A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA 524.2 REV.4.1 VOCS IN DRINKING WATER E524.2</b>						Analyst: <b>SK</b>
Acetone	ND	10		µg/L	1	8/16/2012 11:52:00 PM
Acrylonitrile	ND	1.0		µg/L	1	8/16/2012 11:52:00 PM
Benzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Bromobenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Bromochloromethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Bromodichloromethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Bromoform	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
2-Butanone	ND	10		µg/L	1	8/16/2012 11:52:00 PM
n-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
sec-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
tert-Butylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Carbon disulfide	ND	1.0		µg/L	1	8/16/2012 11:52:00 PM
Carbon tetrachloride	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Chlorobenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Chloroethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Chloroform	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Chloromethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
2-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
4-Chlorotoluene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Dibromochloromethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/16/2012 11:52:00 PM
1,2-Dibromoethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Dibromomethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/16/2012 11:52:00 PM
1,3-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,4-Dichlorobenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Dichlorodifluoromethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,1-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,2-Dichloroethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,1-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
cis-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
trans-1,2-Dichloroethene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,3-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
2,2-Dichloropropane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,1-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
cis-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
trans-1,3-Dichloropropene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Diethyl ether	ND	2.0		µg/L	1	8/16/2012 11:52:00 PM



**AMRO Environmental Laboratories Corp.**

Date: 21-Aug-12

**CLIENT:** Ross Environmental Associates**Client Sample ID:** TB**Lab Order:** 1208029**Collection Date:** 8/8/2012 3:10:00 PM**Project:** 32-073 Judd Residence**Matrix:** AQUEOUS**Lab ID:** 1208029-07A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Ethylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Hexachlorobutadiene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
2-Hexanone	ND	10		µg/L	1	8/16/2012 11:52:00 PM
Isopropylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
4-Isopropyltoluene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Methylene chloride	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/16/2012 11:52:00 PM
Methyl tert-butyl ether	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Naphthalene	ND	2.0		µg/L	1	8/16/2012 11:52:00 PM
n-Propylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Styrene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,1,1,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,1,2,2-Tetrachloroethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Tetrachloroethene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Tetrahydrofuran	ND	5.0		µg/L	1	8/16/2012 11:52:00 PM
Toluene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 11:52:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/16/2012 11:52:00 PM
1,1,1-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,1,2-Trichloroethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Trichloroethene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Trichlorofluoromethane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,2,3-Trichloropropane	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,2,4-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
1,3,5-Trimethylbenzene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Vinyl chloride	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
o-Xylene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
m,p-Xylene	ND	0.50		µg/L	1	8/16/2012 11:52:00 PM
Surr: 1,2-Dichloroethane-d4	93.3	70-130		%REC	1	8/16/2012 11:52:00 PM
Surr: 4-Bromofluorobenzene	91.0	70-130		%REC	1	8/16/2012 11:52:00 PM
Surr: Dibromofluoromethane	85.4	70-130		%REC	1	8/16/2012 11:52:00 PM
Surr: Toluene-d8	87.1	70-130		%REC	1	8/16/2012 11:52:00 PM

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- Critical Infrastructure Protection Information
- Permit, Certification & License Application Forms & Information
- Water System Capacity Development & DWSRF
- Well Driller & Well Location Program
- Source Water Protection
- Water System Operators
- Drinking Water Quality
- The TNC Handbook
- Rules and Regulations
- Staff Directory
- News
- Other Links of Interest
- Agency of Natural Resources GIS Internet Mapping

## Well Details

Date Completed	10/11/1988
Date Received	10/14/1988
Driller	174 - Daniel Gosselin , Gosselin Artesian Well Co Inc
Well Report Number	448
Tag	162-88
Comments	
Town	Derby
Map Cell	51C4
Tax Map	
E911 Address	
Subdivision	
Lot Number	
Owners First Name	HAROLD
Owners Last Name	CARTER
Purchaser First Name	
Purchaser Last Name	
Well Use	Domestic
Well Reason	Replace existing supply
Drilling Method	Rotary (AP)
Well Depth	150.00 feet
Yield Gallons Per Minute	15.00
Yield Test Tested For Hours	0.00
Static Water Level	10.00 feet
Over Flowing	no
Overburden Thickness	5 feet
Casing Length	20.00 feet
Casing Diameter	6.00 inches
Casing Length Below Land Surface	0.00 feet
Casing Length Exposed	0.00
Casing Material	
Casing Weight	0.00 lbs/foot
Casing Finish	Above ground, finished
Liner Length	0.00 feet
Liner Diameter	0.00 inches
Liner Material	
Liner Weight	0.00 lbs/foot
Grout Type	
Seal Type	
Diameter Drilled In Bedrock	0.00 inches
Depth Drilled in Bedrock	0.00 feet
Screen Make Type	
Screen Material	
Screen Length	0.00 feet
Screen Diameter	0.00 inches
Screen Slot Size	0.000 inches
Depth of Screen	0.00 feet
Gravel Size Type	
Casing Sealing Method	Drive shoe only
Yield Test Method	
Well Development	
Not Steel Casing	no
Water Analysis	no
Well Screen	no
AW Partial	no
Unique GIS Name	DC448
Lat Degree	44
Lat Minutes	59
Lat Seconds	12.5700
Long Degree	72
Long Minutes	4
Long Seconds	8.9388
Location Determination Method	screen digitized

### Quick Links

- » [List of Vermont Licensed Well Drillers](#)
- » [Well Driller Licensing Rule PDF](#)
- » [Well Driller License forms](#)

- » [Current Nationwide Threat Level: Yellow](#)

Well Type					
Depth To Liner Top		0.00			
Hydro Fractured		no			
Hydro Fractured Resulting Flow		0.00			
Well Location Submitted As A Dot On A Map N					
WellMainRecordNumber	StartingDepth	EndingDepth	WaterBearing	LithologyCode	LithologyDescription
15419	0.00	1.00		D	TOPSOIL
15419	1.00	5.00		C	BROWN CLAY
15419	5.00	138.00		R	GREY LEDGE
15419	138.00	142.00		R	BROWN CRACKY LEDGE-WATER
15419	142.00	150.00		R	GREY LEDGE

If you would like search for a well or wells in a specific area the following link will relocate you to the ANR GIS Internet Mapping Program.  
<http://www.anr.state.vt.us/site/html/maps.htm>



[www.VermontDrinkingWater.org](http://www.VermontDrinkingWater.org)

VT DEC ■ Water Supply Division ■ 133 South Main Street, Old Pantry Building ■ Waterbury, VT ■ 5671-433  
 Telephone toll-free in VT: 800-823-6500 or call 802-241-3400 ■ Fax: 802-241-3284

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- Well Driller & Well Location Program
- Source Water Protection
- Water System Operators
- Drinking Water Quality
- The TNC Handbook
- Rules and Regulations
- Staff Directory
- News
- Other Links of Interest
- Agency of Natural Resources GIS Internet Mapping

## Well Details

Date Completed	06/24/2002
Date Received	07/11/2002
Driller	174 - Daniel Gosselin , Gosselin Artesian Well Co Inc
Well Report Number	20446
Tag	20446
Comments	
Town	Derby
Map Cell	
Tax Map	
E911 Address	Herick Rd
Subdivision	
Lot Number	
Owners First Name	
Owners Last Name	Joyal Construction
Purchaser First Name	
Purchaser Last Name	
Well Use	Domestic
Well Reason	New Supply
Drilling Method	
Well Depth	350.00 feet
Yield Gallons Per Minute	4.00
Yield Test Tested For Hours	0.50
Static Water Level	20.00 feet
Over Flowing	no
Overburden Thickness	8 feet
Casing Length	40.00 feet
Casing Diameter	6.00 inches
Casing Length Below Land Surface	38.00 feet
Casing Length Exposed	2.00
Casing Material	Steel
Casing Weight	19.00 lbs/foot
Casing Finish	
Liner Length	0.00 feet
Liner Diameter	0.00 inches
Liner Material	
Liner Weight	0.00 lbs/foot
Grout Type	
Seal Type	
Diameter Drilled In Bedrock	0.00 inches
Depth Drilled in Bedrock	0.00 feet
Screen Make Type	
Screen Material	
Screen Length	0.00 feet
Screen Diameter	0.00 inches
Screen Slot Size	0.000 inches
Depth of Screen	0.00 feet
Gravel Size Type	
Casing Sealing Method	Drive shoe only
Yield Test Method	
Well Development	
Not Steel Casing	no
Water Analysis	no
Well Screen	no
AW Partial	no
Unique GIS Name	DC20446
Lat Degree	44
Lat Minutes	59
Lat Seconds	16.7999
Long Degree	72
Long Minutes	4
Long Seconds	27.8400
Location Determination Method	GPS location

### Quick Links

- » [List of Vermont Licensed Well Drillers](#)
- » [Well Driller Licensing Rule PDF](#)
- » [Well Driller License forms](#)

- » [Current Nationwide Threat Level: Yellow](#)

Well Type	Bedrock				
Depth To Liner Top	0.00				
Hydro Fractured	no				
Hydro Fractured Resulting Flow	0.00				
Well Location Submitted As A Dot On A Map					
WellMainRecordNumber	StartingDepth	EndingDepth	WaterBearing	LithologyCode	LithologyDescription
88736	0.00	1.00		D	
88736	1.00	8.00		C	sandy clay
88736	8.00	327.00		R	gray ledge
88736	327.00	328.00	4	R	quartz
88736	328.00	350.00		R	grey ledge

If you would like search for a well or wells in a specific area the following link will relocate you to the ANR GIS Internet Mapping Program.

<http://www.anr.state.vt.us/site/html/maps.htm>



[www.VermontDrinkingWater.org](http://www.VermontDrinkingWater.org)

VT DEC ■ Water Supply Division ■ 13 South Main Street, Old Pantry Building ■ Waterbury, VT ■ 5671-443  
Telephone toll-free in VT: 800-823-6500 or call 802-241-3400 ■ Fax: 802-241-3284

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- » Permit, Certification & License Application Forms & Information
- » Water System Capacity Development & DWSRF
- » Well Driller & Well Location Program
- » Source Water Protection
- » Water System Operators
- » Drinking Water Quality
- » The TNC Handbook
- » Rules and Regulations
- » Staff Directory
- » News
- » Other Links of Interest
- » Agency of Natural Resources GIS Internet Mapping

## Well Details

Date Completed	02/06/1980
Date Received	08/13/1980
Driller	115 - Larry L Cooke , Northeast Well Drilling Inc.
Well Report Number	191
Tag	
Comments	
Town	Derby
Map Cell	51C4
Tax Map	
E911 Address	
Subdivision	
Lot Number	
Owners First Name	DWIGHT
Owners Last Name	JUDD
Purchaser First Name	
Purchaser Last Name	
Well Use	Domestic
Well Reason	
Drilling Method	Rotary (AP)
Well Depth	300.00 feet
Yield Gallons Per Minute	5.00
Yield Test Tested For Hours	0.00
Static Water Level	0.00 feet
Over Flowing	no
Overburden Thickness	15 feet
Casing Length	25.00 feet
Casing Diameter	6.00 inches
Casing Length Below Land Surface	0.00 feet
Casing Length Exposed	0.00
Casing Material	
Casing Weight	0.00 lbs/foot
Casing Finish	
Liner Length	0.00 feet
Liner Diameter	0.00 inches
Liner Material	
Liner Weight	0.00 lbs/foot
Grout Type	
Seal Type	
Diameter Drilled In Bedrock	0.00 inches
Depth Drilled in Bedrock	0.00 feet
Screen Make Type	
Screen Material	
Screen Length	0.00 feet
Screen Diameter	0.00 inches
Screen Slot Size	0.000 inches
Depth of Screen	0.00 feet
Gravel Size Type	
Casing Sealing Method	Drive shoe only
Yield Test Method	
Well Development	
Not Steel Casing	no
Water Analysis	no
Well Screen	no
AW Partial	no
Unique GIS Name	DC191
Lat Degree	44
Lat Minutes	59
Lat Seconds	14.3699
Long Degree	72
Long Minutes	4
Long Seconds	27.4542
Location Determination Method	screen digitized

### Quick Links

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- » [Well Driller License forms](#)

- » [Current Nationwide Threat Level: Yellow](#)

Well Type  
Depth To Liner Top 0.00  
Hydro Fractured no  
Hydro Fractured Resulting Flow 0.00  
Well Location Submitted As A Dot On A Map N

WellMainRecordNumber	StartingDepth	EndingDepth	WaterBearing	LithologyCode	LithologyDescription
15163	0.00	15.00	G		gravel
15163	15.00	300.00	R		bedrock

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[www.VermontDrinkingWater.org](http://www.VermontDrinkingWater.org)

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## Well Details

Date Completed	06/24/2002
Date Received	07/11/2002
Driller	174 - Daniel Gosselin , Gosselin Artesian Well Co Inc
Well Report Number	20446
Tag	20446
Comments	
Town	Derby
Map Cell	
Tax Map	
E911 Address	Herick Rd
Subdivision	
Lot Number	
Owners First Name	
Owners Last Name	Joyal Construction
Purchaser First Name	
Purchaser Last Name	
Well Use	Domestic
Well Reason	New Supply
Drilling Method	
Well Depth	350.00 feet
Yield Gallons Per Minute	4.00
Yield Test Tested For Hours	0.50
Static Water Level	20.00 feet
Over Flowing	no
Overburden Thickness	8 feet
Casing Length	40.00 feet
Casing Diameter	6.00 inches
Casing Length Below Land Surface	38.00 feet
Casing Length Exposed	2.00
Casing Material	Steel
Casing Weight	19.00 lbs/foot
Casing Finish	
Liner Length	0.00 feet
Liner Diameter	0.00 inches
Liner Material	
Liner Weight	0.00 lbs/foot
Grout Type	
Seal Type	
Diameter Drilled In Bedrock	0.00 inches
Depth Drilled in Bedrock	0.00 feet
Screen Make Type	
Screen Material	
Screen Length	0.00 feet
Screen Diameter	0.00 inches
Screen Slot Size	0.000 inches
Depth of Screen	0.00 feet
Gravel Size Type	
Casing Sealing Method	Drive shoe only
Yield Test Method	
Well Development	
Not Steel Casing	no
Water Analysis	no
Well Screen	no
AW Partial	no
Unique GIS Name	DC20446
Lat Degree	44
Lat Minutes	59
Lat Seconds	16.7999
Long Degree	72
Long Minutes	4
Long Seconds	27.8400
Location Determination Method	GPS location

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